Amendments to the Drawings

Figs. 1 - 8 have been amended to include "(Prior Art)" in the legend following the figure number. No new matter has been introduced with these amended drawings.

REMARKS

The Specification has been amended. Claims 1 - 2, 4 - 8, 10 - 11, 13, 17, 20 - 21, 23 - 26, and 31 have been amended. No new matter has been introduced with these amendments, all of which are supported in the specification as originally filed. Claims 1 - 31 remain in the application.

I.   Objection to the Drawings

Paragraph 2 of the Office Action dated April 20, 2006 (hereinafter, "the Office Action") states that Figs. 1, 2, 3A - 3C, 4A - 4C, and 6 - 8 should be designated by a legend such as --Prior Art--. Accordingly, Figs. 1 - 8 have been amended herein to include the legend "(Prior Art)", as discussed above in "Amendments to the Drawings". No new matter has been introduced with these proposed drawing amendments.

Paragraph 2 of the Office Action also discusses several reference numbers appearing in Figs. 8, 10, and 11 which were not used in the specification. Appropriate amendments have been made to the specification.

Accordingly, Applicants respectfully request withdrawal of the objection to the drawings.

II.   Objections to the Claims

Paragraph 3 of the Office Action states that Claims 4, 17, 20, and 27 are objected to because of informalities. Appropriate corrections have been made herein, and the Examiner is respectfully requested to withdraw the objections to the claims.

III.   Rejection under 35 U. S. C. §112, First Paragraph

Paragraph 4 of the Office Action states that Claims 1 and 13 are rejected under 35 U.S.C. §112, first paragraph, as representing single means claims. Applicants respectfully traverse this rejection. Independent Claims 1 and 13 are method claims, and do not recite any "means for" language. See MPEP §2164.08(a), from which language is quoted in paragraph 4 of the Office Action, stating "... where a means recitation does not appear in combination with another recited element of means ..." (emphasis added). Because Applicants' Claims 1 and 13 do not contain any means recitations, Applicants respectfully submit that MPEP §2164.08(a) is not relevant to these claims, and that this rejection is therefore improper. Accordingly, the Examiner is respectfully requested to withdraw the §112, first paragraph rejection.

IV.   Rejection under 35 U. S. C. §112, Second Paragraph

Paragraph 5 of the Office Action states that Claims 13 and 24 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite. This rejection is respectfully traversed.

With regard to independent Claim 13, the Office Action states "Since the claim is an independent claim, it is unclear how the method can further comprise of a step" (Office Action,

Page 4, last paragraph, last sentence). Applicants respectfully submit that it is well understood that method claims comprise steps, whether those method claims are independent or dependent claims. Accordingly, this rejection is deemed to be improper.

With regard to independent Claim 24, the Office Action states "Since the claim is an independent claim, it is unclear how the method can further comprise of a step" (Office Action, Page 5, first paragraph, last sentence). Applicants respectfully note that Claim 24 is <u>not</u> a method claim, and does <u>not</u> recite any "step" limitations. Accordingly, this rejection is deemed to be improper.

In view of the above, the Examiner is respectfully requested to withdraw the §112, second paragraph rejection.

V.   <u>Rejection under 35 U. S. C. §101</u>

Paragraph 6 of the Office Action states that Claims 1 - 25 are directed to non-statutory subject matter. This rejection is respectfully traversed.

Applicants have amended their independent Claim 1 herein to more clearly specify limitations of their claimed invention. This amendment is not made for reasons of patentability, however, as Applicants respectfully submit that Claim 1 as originally filed specified statutory subject matter. Dependent Claims 2 - 12 are directed to statutory subject matter by virtue of

their dependency from Claim 1.

With regard to independent Claim 13, Applicants respectfully note that this claim

specifies "... validating an input ... while generating output [objects], from the input ...".

Applicants respectfully submit that the "generating" recitation is clearly directed toward

statutory subject matter. See, for example, the holding in *Arrhythmia Research Technology*

Inc. v. Corazonix Corp., 22 USPQ 2d 1033, 1038 (Fed. Cir. 1992), which stated

> [T]he claimed steps of "converting", "applying", "determining", and
> "comparing" are physical process steps. . . [which] comprise statutory subject
> matter.

Furthermore, *Arrhythmia Research Technology, Inc.* also states

> The computer-performed operations transform a particular input signal to a
> different output signal, in accordance with the internal structure of the
> computer as configured by electronic instructions. "The claimed invention . . .
> converts one physical thing into another physical thing just as any other
> electrical circuitry would do." *Id.*, 22 USPQ 2d 1033, 1039 (Fed. Cir. 1992)
> (quoting *In re Sherwood*, 204 USPQ 537, 546 (C.C.P.A. 1980), *cert. denied*,
> 450 U.S. 994 (1981)).

Applicants therefore respectfully submit that independent Claim 13, as well as its

dependent Claims 14 - 23, specify statutory subject matter.

The Office Action states, on Page 8, lines 1 - 2, that "Even though claim 24 recites a

system, the claim is directed towards software per se. Software per se fails to produce a

tangible result.". Applicants respectfully disagree with this analysis of independent Claim 24.

Claim 24 specifies "a validating parser" (line 3). As is well known, a validating parser is <u>not</u> "software per se", but instead is an executable program. The recitations on lines 4 - 11 of Claim 24 specify first and second "means for <u>using</u> the validating parser to ..." (emphasis added). In view of expediting allowance of the application, however, Applicants have amended Claim 24 to specify that the validating parser is "usable by a computer" (Claim 24, line 3) and that the at least one generated output object is "for use by a computer application" (Claim 24, line 8).

VI.   <u>Rejection under 35 U. S. C. §102</u>

Paragraph 8 of the Office Action states that Claims 1 - 12, 24 - 26, and 29 - 30 are rejected under 35 U.S.C. §102 as being anticipated by U. S. Patent Publication 2003/0208498 to Feinberg et al. (hereinafter, "Feinberg"). This rejection is respectfully traversed.

Applicants respectfully submit that their independent Claims 1, 24, and 26 specify limitations not taught by the cited reference, as will now be described.

With reference to independent Claim 1, this claim recites

    A computer-implemented method of selecting an abstraction level to use
when generating parser output, comprising steps of:
        requesting, by an application program, generation of parser output by a
parser that parses an input; and
        receiving, by the application program from the parser, output generated
by the parser from the input, <u>wherein the generated output adheres to a</u>
<u>different syntax level than a syntax level used when validating the input</u>.
(emphasis added)

Applicants find no teaching in Feinberg of (at least) the above-underlined recitations. That is, Feinberg does not teach that "... the generated output adheres to a different syntax level than a syntax level used when validating the input" (Claim 1, lines 6 - 7, emphasis added). The Office Action cites paragraph [0021] of Feinberg as teaching the validating of the input using the "design time schema", and states that the generated output adheres to the "run time schema" (Office Action, p. 9, lines 6 - 10). Applicants respectfully disagree. Feinberg's use of the "design time schema" is separate and distinct from his use of the run time schema. That is, the design time schema is not being used to validate the input in Feinberg's technique. Rather, the design time schema is being modified to create the run time schema.

The design time schema is also referred to by Feinberg as the "input schema", and the run time schema is also referred to by Feinberg as an "enhanced" schema. That is, the run time schema is an enhanced version of the design time schema. See, for example, paragraph [0021], lines 2 - 4, stating "The schema enhancer merges a design time schema [and other information] into a run time schema.".

Feinberg does state that his run time schema can be used "to validate various files". See, e.g., paragraph [0055]. **Figs. 10A - 10c** provide sample XML documents that can be validated using the run time schema in **Figs. 8a - 8b**, for example. Notably, however, the sample XML documents cannot be validated using the design time schema illustrated in **Fig. 5**. This is because the design time schema lacks definitions for the "language" attribute used in the "name" element on the third line of **Fig. 10b** and also lacks definitions for the "wrapper"

element -- and its corresponding "language" attribute -- used in the third line of **Fig. 10c**. By contrast, once the design time schema has been <u>enhanced</u> according to the parameter file in **Fig. 6** and the preamble file in **Fig. 7**, the resulting (i.e., enhanced) run time schema in **Figs. 8a - 8b** <u>does</u> contain definitions for these "language" attributes and "wrapper" element. See the following:

- reference numbers **803 - 815** of **Fig. 8a**, where the "language" attribute is defined;

- reference numbers **816 - 820** of **Fig. 8a**, where the "wrapper" element is defined; and

- reference number **829** of **Fig. 8a**, where the "language" attribute for the "name" element is referenced.

Thus, it can be seen that the sample XML documents can be validated by the <u>run time schema</u>, but <u>not by the design time schema</u>.

Accordingly, Applicants respectfully submit that their independent Claim 1 is clearly patentable over Feinberg. Dependent Claims 2 - 12 are therefore deemed patentable by virtue of (*inter alia*) the allowability of Claim 1 from which they depend.

With regard to independent Claim 24, this claim recites

A system for applying abstraction to object markup definitions, further comprising:
a validating parser usable by a computer;

first means for using the validating parser to validate an input document expressed as an object markup definition, wherein the <u>validation is performed according to a syntax level which allows the object markup definition to be successfully validated</u>; and

second means for using the validating parser to apply abstraction to the object markup definition when generating at least one output object for use by a computer application therefrom, responsive to the first means, wherein the applying of the abstraction <u>generates the at least one output object according to a different syntax level which would not allow the object markup definition to be successfully validated</u>. (emphasis added)

Feinberg fails to teach (at least) the above-underlined recitations of Claim 24. The Office Action states, on Page 12, lines 1 - 4, that "the design time schema allows for the syntax level to be successfully validated". Page 12, lines 7 - 11 of the Office Action state that "the run time schema is used to validate the new syntax level". This is an incorrect interpretation of Feinberg, and an incorrect analysis of Applicants' claim language, as will now be described.

Feinberg does not actually use his design time schema for validation when the run time schema is being generated. Rather, as discussed above, the design time schema is simply used as an input to the schema enhancer, such that validation can <u>subsequently</u> be performed by the newly-generated (enhanced) run time schema. Feinberg has no teaching, nor any suggestion, of using the design time schema for validating the markup in an input document and then generating output objects <u>from the markup in this same input document</u> ("... generating at least one output object ... therefrom .."; Claim 24, lines 8 - 9) using the run time schema.

Furthermore, whereas the Office Action states that Feinberg's run time schema is used to "validate the new syntax level", this is <u>not</u> the claim language of Claim 24. Claim 24

specifies that the "different syntax level" is used for <u>generating at least one object</u> from the

markup in the input document (Claim 24, lines 7 - 11): generating an object from markup in an

input document <u>is different from</u> validating the markup in the input document.

Accordingly, Applicants respectfully submit that their independent Claim 24 is clearly

patentable over Feinberg. Dependent Claim 25 is therefore deemed patentable by virtue of

(*inter alia*) the allowability of Claim 24 from which it depends.

With regard to Applicants' independent Claim 26, this claim recites:

> A computer program product for parsing of input, the computer
> program product embodied on one or more computer-usable media and
> comprising:
> computer-readable program code for <u>validating an input according to a</u>
> <u>first schema,</u> wherein the first schema defines a first syntax level that enables
> content in the input to be successfully validated; and
> computer-readable program code for <u>generating one or more output</u>
> <u>objects according to a second schema, upon parsing the successfully-validated</u>
> <u>content in the input,</u> wherein the second schema defines a second syntax level
> that does not enable the content in the input to be successfully validated.
> (emphasis added)

Feinberg fails to teach (at least) the above-underlined recitations of Claim 26. The

Office Action states, on Page 12, lines 21 - 22, that "the design time schema is considered to

represent the *first schema*". Page 13, lines 2 - 3 of the Office Action state that "the design

time schema allows for the syntax level to be successfully validated". Page 13, lines 8 - 10 of

the Office Action state that "the run time schema is used to validate the new syntax level". As

discussed above with reference to Claim 24, this is an incorrect interpretation of Feinberg, and

an incorrect analysis of Applicants' claim language. Refer to the above discussion of Claim 24, which applies in a similar manner to Applicants' Claim 26.

Accordingly, Applicants respectfully submit that their independent Claim 26 is clearly patentable over Feinberg. Dependent Claims 29 - 30 are therefore deemed patentable by virtue of (*inter alia*) the allowability of Claim 26 from which they depend.

In view of the above, the Examiner is respectfully requested to withdraw the §102 rejection.

VII.   Rejection under 35 U. S. C. §103(a)

Paragraph 10 of the Office Action states that Claims 13 - 23 are rejected under 35 U.S.C. §103(a) as being unpatentable over Feinberg in view of "XQuery 1.0 and XPath 2.0 Functions and Operators", written by W3C (hereinafter, "W3C"). Paragraph 11 of the Office Action states that Claims 27 - 28 are rejected under 35 U.S.C. §103(a) as being unpatentable over Feinberg in view of W3C. Paragraph 12 of the Office Action states that Claim 31 is rejected under 35 U.S.C. §103(a) as being unpatentable over Feinberg in view of U. S. Patent 6,996,589 to Jayaram et al. These rejections are respectfully traversed.

With regard to independent Claim 13, this claim recites:

A computer-implemented method of casting objects, further comprising steps of:
validating an input according to a first syntax level while generating

output objects, <u>from the input,</u> <u>according to a second syntax level</u>; and
    providing the generated output objects for use by an application
program. (emphasis added)

A combination of Feinberg and W3C (assuming, *arguendo*, that such combination can

be made, and that one of skill in the art would be motivated to attempt it) fails to teach (at

least) the above-underlined recitations of Claim 13. The Office Action states, on Page 15, lines

1 - 3, that Feinberg teaches "pars[ing] the XML file based on the design time schema" while

"the syntax level of the generated output adheres to ... the run time schema". This is an

incorrect interpretation of Feinberg. Feinberg describes validating an input document

according to the design time schema, <u>using a prior art approach</u> (paragraph **[0051]**); <u>or, when</u>

<u>using Feinberg's "enhanced" schema, validating an input document according to the *run time*</u>

<u>schema</u> (paragraph **[0055]**). However, Feinberg has no teaching nor any suggestion of

Applicants' claimed approach of <u>validating an input according to a first syntax level</u> <u>while</u>

<u>generating output objects,</u> <u>from the input,</u> <u>according to a second syntax level</u>.

The Office Action states, on Page 15, line 4, that Feinberg fails to explicitly teach

"casting objects". Various parts of Section 17 of W3C are then cited as teaching this casting

of objects. Applicants respectfully disagree with this analysis. However, this is a moot point

because, as demonstrated above, Feinberg fails to teach the limitations for which it was cited in

the Office Action (and such limitations are clearly not taught or suggested by W3C).

Accordingly, Applicants respectfully submit that their independent Claim 13 is clearly

patentable over Feinberg and W3C. Dependent Claims 14 - 23 are therefore deemed

patentable by virtue of (*inter alia*) the allowability of Claim 13 from which they depend.

With regard to dependent Claims 27 - 28, these claims are deemed patentable by virtue

of (*inter alia*) the allowability of Claim 26 from which they depend. Refer to the discussion of

Claim 26, above, for more information.

With regard to independent Claim 31, this claim recites:

> A computer-implemented method of providing validation and parsing
> for clients, comprising steps of:
> providing a validating parser that enables a client to dynamically select
> an abstraction level for use when generating output from the validating parser;
> obtaining an input document to be validated and parsed for the client;
> validating the input document with the provided validating parser,
> wherein the validation is performed according to a first syntax level associated
> with syntax specified in the input document; and
> generating output from the input document with the provided validating
> parser, for use by the client, wherein the generated output has syntax that
> conforms to the abstraction level that has been dynamically selected by the
> client and wherein the abstraction level is a refinement of the first syntax level.
> (emphasis added)

A combination of Feinberg and W3C (assuming, *arguendo*, that such combination can

be made, and that one of skill in the art would be motivated to attempt it) fails to teach (at

least) the above-underlined recitations of Claim 31. Page 20, lines 19 - 20 of the Office Action

states (with reference to Feinberg) that "the syntax level used when validating the input is

defined by the design time schema". Refer to the discussions of other independent claims,

above, where it is noted that Feinberg's design time schema is only used in a prior art sense for

validating input documents (and the design time schema <u>is not used for validation when the run time schema is being used for generating output</u>). Page 20, line 21 - Page 21, line 5 of the Office Action analyzes the "generating" element of Applicants' Claim 31, and cites paragraphs **[0049]**, **[0051]**, **[0054]**, and **[0021]**. Nowhere in these cited paragraphs is there any teaching that can be aligned to the claim language of Applicants' Claim 31. Applicants' Claim 31 specifies, for example, that the "abstraction level [to which the syntax of the generated output conforms] is a refinement of the first syntax level [which is used when validating the syntax in the input document]" (Claim 31, lines 6 - 11). Feinberg has no teaching, nor any suggestion, of this "refinement" relationship between an abstraction level and a first syntax level.

Accordingly, Applicants respectfully submit that their independent Claim 31 is clearly patentable over Feinberg.

In view of the above, the Examiner is respectfully requested to withdraw the §103 rejection.

VIII. <u>Conclusion</u>

Applicants respectfully request reconsideration of the pending rejected claims, withdrawal of all presently outstanding objections and rejections, and allowance of all claims at an early date.

Respectfully submitted,

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Attachment: Replacement Sheets (9)